Sino-German Workshop

Urban Remote Sensing and Surveying

2009.09.22 - 2009.09.24

at the

Haiyi Jinjiang Hotel

海怡锦江大酒店

武汉市武昌洪山路特1号武汉电信商务会议中心

organized by

LIESMARS

supported by

同德中行
Deutschland und China - Gemeinsam in Bewegung

德国
灵感与创新
Deutschland
Land der Ideen

DEUTSCH-CHINESISCHES
Jahr der Wissenschaft und Bildung
德中科学教育年
2009/10

Academic committee

Chair:
Prof. Dr. Deren Li, Wuhan University

Prof. Li is Director of the State Key Laboratory of Information Engineering in Surveying Mapping and Remote Sensing (LIESMARS) of the Wuhan University. He is Academician of the Chinese Academy of Science, of the Chinese Academy of Engineering and of the International Academy of European and Asian Studies. He is Vice President of the Chinese Society of Geodesy, the Chinese Society of Photogrammetry and Cartography, of the Chinese Society of Image and Graphics and of the Chinese Society of Geography. He is Chairman of the Academic commission of Wuhan University.

Secretary:

Prof. Dr. Mingsheng Liao, Wuhan University

Members:

Prof. Dr. Uwe Stilla, Technische Universität München
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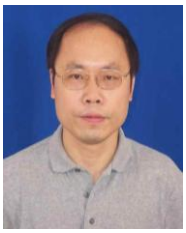
Organization committee

Chair:
Prof. Dr. Mingsheng Liao, Wuhan University



Prof. Liao is full Professor at the State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University. He published more than 30 peer-reviewed journal articles and a book about Synthetic Aperture Radar Interferometry. His area of research covers remote sensing image processing, algorithms for interferometric SAR, data fusion and applications of remote sensing data.

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Abstract

Surveying and Mapping has a history going back thousands of years. The techniques changed over time and nowadays the highly precise position estimation from space using the Global Positioning System (GPS) has become a standard technique and is even implemented in many modern mobile phones.

In urban areas surveying and mapping is of the utmost importance for planning and construction. GPS allows the navigation in unknown cities and satellite images show the growth and state of the cities. The quality of the air, the amount of impervious surfaces, growth and urbanization can be surveyed from space. The digitalization of surveying and the wide usage of GIS in cartography will continue to change our image of the earth.

With the launch of the commercial remote sensing system IKONOS in 1999 a new era of remote sensing started. Because of the high spatial resolution of one meter, satellite remote sensing in urban areas became possible. With Google Earth, remote sensing reached the mass market. The launch of the German high-resolution radar remote sensing system TerraSAR-X in 2007 marked a new milestone in remote sensing. With a spatial resolution of one meter, radar systems can be used in urban areas. A tremendous change in radar remote sensing is about to start.

Because of these developments, but also because of the special scientific and economical importance of radar remote sensing in Germany and China, radar remote sensing is the focus of the workshop. The new technique offers a variety of scientific co-operations.

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德中同行

Deutschland und China –
Gemeinsam in Bewegung

Tuesday, 2009-09-22

09:00 – 09:30	**Opening Ceremony**	
09:30 – 10:00	**Ethical Questions in Surveillance and Location Based Services**	
	Ethical Design of Location-Based Services	**Sandro Gaycken** *Universität Stuttgart*
Break		
10:15 – 12:00	**Remote Sensing in urban areas**	
	Remote sensing data fusion in urban areas	**Uwe Sörgel** *Leibniz Universität Hannover*
	Evaluation of Urban Heat Environment Using Multi-algorithm and Multi-scale Images	**Peijun Du** *China University of Mining and Technology*
	High resolution thermal mapping of buildings using 3D city models	**Uwe Stilla** *Technische Universität München*
	Application of Co-training Based Semi-supervised Learning Method in Remote Sensing Image Classification	**Changqing Ke** *Nanjing University*

13:30 – 14:30	**Advanced SAR**	
	SAR Tomography for 4D city mapping using TerraSAR-X Spotlight data	**Xiaoxiang Zhu** *DLR*
	DEM Extraction with PolSAR Data	**Wen Hong** *Chinese Academy of Sciences*
Break		
14:45 – 15:15	**Creation and applications of 3D city models**	
	3D City Reconstruction from LiDAR - The 3D Berlin Project	**Martin Kada** *Universität Stuttgart*
	On the feasibility of image matching for high quality Urban 3D Data Collection	**Norbert Haala** *Universität Stuttgart*
15:15 – 16:15	**Traffic analysis**	
	Traffic Monitoring in Large-scale Urban Areas by Airborne LiDAR - Feasibility and Analysis	**Wei Yao** *Technische Universität München*
	Extracting and Modeling Natural Objects from Mobile Laser Scanning Point Clouds	**Bisheng Yang** *Wuhan University*
Break		
16:30 – 17:30	**Disaster Prevention and Preparedness**	
	Design and develop a CVGE to support emergence response on air pollution accident	**Bingli Xu** *Chinese University Hong Kong*
	Spatial data mining and integration of vague textual information to support preparedness and disaster management	**Daniela Richter** *Universität Karlsruhe*

Wednesday (morning), 2009-09-23

09:30 – 12:30	**PS-InSAR / D-InsAR**	
	Persistent Scatterer Interferometry for Subsidence Measurements	**Alexander Schunert** *Leibniz Universität Hannover*
	Small Stack PS-InSAR in Shanghai	**Mingsheng Liao** *Wuhan University*
	Break	
	Persistent Scatterer Interferometry in Urban Areas Based on TerraSAR-X High Resolution Spotlight Datastacks	**Xiaoxiang Zhu** *DLR*
	Urban subsidence mapping with advanced satellite differential-INSAR techniques	**Yonghong Zhang** *Chinese Academy of Surveying and Mapping*
	Break	
	Practical monitoring of Urban Subsidence in Large Scale Area with InSAR Technology	**Chao Wang** *Center of Earth Observation and Digital Earth*

Wednesday (afternoon), 2009-09-23

Technical tour to the State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing

Thursday, 2009-09-24 (at LIESMARS)

10:00 – 11:30	**Lectures (open)**	
	TerraSAR-X Services Applications to Support the Chinese Development	**Ralf Düring** *Infoterra GmbH*
	Cyberwarfare and Security – Ethical questions in the information age	**Sandro Gaycken** *Universität Stuttgart*
	n/a	**Norbert Haala** *Universität Stuttgart*

14:00 – 17:00	**Discussion in special interest groups**		
	SAR	LiDAR	Visualization

The workshop will be held at the Haiyi Jinjiang Hotel

海怡锦江大酒店

湖北武汉市武昌洪山路特 1 号武汉电信商务会议中心

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